

In the Claims:

Please replace all previous claim listings, including claim listings as amended by the Examiner in the Examiner's Amendment of March 7, 2007 with the following claim listing. The amendments herein show the changes to the claims made from the claims as they stood subsequent to entry of the Examiner's Amendment.

1. (Canceled)

2. (Currently Amended) A method of maintaining association integrity of Enterprise JavaBeans (EJBs) during EJB passivation and reactivation comprising:

obtaining a collection of target EJBs that are associated with a source EJB in a one-to-many or many-to-many association in response to traversing the one-to-many or many-to-many association of the source EJB; and

registering the collection of target EJBs that are ~~associate~~ associated with a source EJB in a one-to-many or many-to-many association in a collection registry,

wherein the registering comprises registering the collection of target EJBs that are associated with a source EJB in a one-to-many or many-to-many association in the collection registry in response to passivation of the source;

reactivating the source EJB;

fetching the collection of target EJBs that are associated with the source EJB that is reactivated from the collection registry if the collection of target EJBs that are associated with the source EJB is registered in the collection registry; and

materializing the collection of target EJBs that are associated with the source EJB that is reactivated from secondary storage if the collection of target EJBs that are associated with the source EJB is not registered in the collection registry.

3. (Original) A method according to Claim 2 further comprising:

reactivating the source EJB; and

fetching the collection of target EJBs that are associated with the source EJB that is reactivated from the collection registry in response to traversing the one-to-many or many-to-many association of the source EJB that is reactivated.

4. (Canceled).

5. (Currently Amended) A method of maintaining association integrity of Enterprise JavaBeans (EJBs) during EJB passivation and reactivation comprising:

obtaining a collection of target EJBs that are associated with a source EJB in a one-to-many or many-to-many association in response to traversing the one-to-many or many-to-many association of the source EJB; and

registering the collection of target EJBs that are associated with a source EJB in a one-to-many or many-to-many association in a collection registry,

wherein the one-to-many or many-to-many association between the source EJB and the collection of target EJBs is managed by a link factory, and wherein the registering comprises:

creating the collection registry by the link factory in response to traversing the one-to-many or many-to-many association of the source EJB; and

registering the collection of target EJBs that are associated with the source EJB in the collection registry.

6. (Previously Presented) A method according to Claim 3:

wherein the one-to-many or many-to-many association between the source EJB and the collection of EJBs is managed by a link factory;

wherein the registering comprises:

creating a collection registry by the link factory for the one-to-many or many-to-many association in response to traversing the one-to-many association or many-to-many association of the source EJB; and

creating a link object by the link factory to manage an instance of the one-to-many or many-to-many association; and

wherein the fetching comprises:

checking the collection registry by the link object;

returning the collection of EJBs if the link object finds the collection of EJBs in the collection registry; and

materializing the target collection if the target collection is not contained in the collection registry.

7. (Original) A method according to Claim 6 wherein the materializing further comprises referencing the collection by the link object.

8. (Original) A method according to Claim 6 wherein the fetching further comprises:
returning the target collection by the link object if the one-to-many or many-to-many association is materialized.

9. (Canceled)

10. (Currently Amended) A system for maintaining association integrity of Enterprise JavaBeans (EJBs) during EJB passivation and reactivation comprising:

a computer usable storage medium;

a collection registry; and

a module that includes computer readable program code that is embodied in the computer usable storage medium, wherein the computer readable program code ~~that~~ is configured to obtain a collection of target EJBs that are associated with a source EJB in a one-to-many or many-to-many association in response to traversing the one-to-many or many-to-many association of the source EJB, and to register the collection of target EJBs that are associated with a source EJB in a one-to-many or many-to-many association in the collection registry,

wherein the module is configured to register the collection of target EJBs that are associated with a source EJB in a one-to-many or many-to-many association in a the collection registry in response to passivation of the source EJB;

wherein the module is further configured to fetch the collection of target EJBs that are associated with a source EJB that is reactivated from the collection registry if the collection of target EJBs that are associated with the source EJB is registered in the collection registry, and materialize the collection of target EJBs that are associated with the source EJB that is reactivated from secondary storage if the collection of target EJBs that are associated with the source EJB is not registered in the collection registry.

11. (Original) A system according to Claim 10 wherein the module is further configured to fetch the collection of target EJBs that are associated with a source EJB that is reactivated from the collection registry in response to traversing the one-to-many or many-to-many association of the source EJB that is reactivated.

12. (Canceled).

13. (Canceled)

14. (Original) A system according to Claim 10 further comprising:
a link factory that is configured to manage the one-to-many or many-to-many association between the source EJB and the collection of EJBs;

wherein the module is configured to register the collection of target EJBs by creating a collection registry by the link factory for the one-to-many or many-to-many association in response to traversing the one-to-many association or many-to-many association of the source EJB and creating a linked object by the link factory to manage an instance of the one-to-many or many-to-many association; and

wherein the module is configured to fetch the collection of target EJBs by checking the collection registry by the link object in response to the one-to-many or many-to-many association not being materialized, returning the collection of EJBs if the link object finds the

collection of EJBs in the collection registry and materializing the target collection if the target collection is not contained in the collection registry.

15. (Canceled)

16. (Currently Amended) A computer program product for maintaining association integrity of Enterprise JavaBeans (EJBs) during EJB passivation and reactivation, the computer program product comprising a computer usable storage medium having computer-readable program code embodied in the medium, the computer-readable program code comprising:

computer-readable program code that is configured to obtain a collection of target EJBs that are associated with a source EJB in a one-to-many or many-to-many association in response to traversing the one-to-many or many-to-many association of the source EJB; and

computer-readable program code that is configured to register the collection of target EJBs that are associated with a source EJB in a one-to-many or many-to-many association in a collection registry,

computer-readable program code that is configured to fetch the collection of target EJBs that are associated with a source EJB that is reactivated from the collection registry if the collection of target EJBs that are associated with the source EJB is registered in the collection registry; ~~and~~

computer-readable program code that is configured to materialize the collection of target EJBs that are associated with the source EJB that is reactivated from secondary storage if the collection of target EJBs that are associated with the source EJB is not registered in the collection registry; and

wherein the computer-readable program code that is configured to register comprises computer-readable program code that is configured to register the collection of target EJBs that are associated with a source EJB in a one-to-many or many-to-many association in a the collection registry in response to passivation of the source EJB.

17. (Original) A computer program product according to Claim 16 further comprising:

computer-readable program code that is configured to fetch the collection of target EJBs that are associated with a source EJB that is reactivated from the collection registry in response to traversing the one-to-many or many-to-many association of the source EJB that is reactivated.

18. (Canceled)

19. (Canceled)

20. (Previously Presented) A computer program product according to Claim 17:

wherein the one-to-many or many-to-many association between the source EJB and the collection of EJBs is managed by a link factory;

wherein the computer-readable program code that is configured to register comprises:

computer-readable program code that is configured to create a collection registry by the link factory for the one-to-many or many-to-many association in response to traversing the one-to-many association or many-to-many association of the source EJB; and

computer-readable program code that is configured to create a link object by the link factory to manage an instance of the one-to-many or many-to-many associations; and

wherein the computer-readable program code that is configured to fetch comprises:

computer-readable program code that is configured to check the collection registry by the link object;

computer-readable program code that is configured to return the collection of EJBs if the link object finds the collection of EJBs in the collection registry; and

computer-readable program code that is configured to materialize the target collection if the target collection is not contained in the collection registry.

21-23. (Cancelled)